Original Research Article

Sociodemographic and Clinical Characteristics of Patients Presenting with Globus Pharyngeus: A Descriptive Cross-sectional Study

ABSTRACT

Aims: This study aims to determine the socio-demographic and clinical characteristics of the patients presenting with globus pharyngeus in an outpatient clinic of a tertiary care center in Nepal

Study design: Descriptive cross-sectional study.

Place and Duration of Study: The study was carried out in the psychiatry outpatient department of Chitwan Medical College, Bharatpur, Nepal between Aug 2021 and Dec 2021.

Methodology: Globus pharyngeus was diagnosed after ruling out obvious pathology related to the throat and gastrointestinal system by specialists from the respective departments. The Glasgow Edinburgh Throat Scale (GETS) with its Nepali translation and study-specific structured proforma for sociodemographic and clinical profiles has been used as the study tool. Patients were assessed by the consultant psychiatrist to find out psychiatric comorbidities.

Results: Among the one hundred patients with a diagnosis of Globus pharyngeus, most patients were female (n=69), from an urban background(n=63), living in nuclear families (n=57), and were married (n=85). The mean age of patients with globus diagnosis was 37 years. The mean duration of globus symptoms was 32 months. Ninety-seven patients were previously treated for their problems from other centers. Discomfort/irritation in the throat (n=92), Feeling something stuck in the throat (n=91), and pain in the throat (n=81), were common symptoms. Psychiatric comorbidities [lifetime] were seen in forty-two patients.

Conclusion: Female gender, age of thirties, married status, belonging to the urban background, living in a nuclear family, and long duration of treatment history are commonly observed characteristics of these patients. Comorbid anxiety and depression are frequently observed psychiatric comorbidities.

Keywords: ***Globus pharyngeus, psychiatric comorbidities, GERD, ICD-10***

INTRODUCTION:

Hippocrates first described Globus 2500 years ago. The term ‘globus' means ‘ball’ in Latin. Globus pharyngeus is a well-defined clinical symptom that mostly presents as an unusual sensation of a foreign body or lump in the throat. It’s a common presentation in patients visiting the Ear, Nose, and Throat (ENT) department with complaints like sensations of swelling, itching, scratching, and foreign body in the throat. Initially termed globus hystericus, Malcomson coined the more accurate term “Globus Pharyngeus” in 1968 after discovering that most patients experiencing globus did not have a hysterical personality [1,2].

The pathogenesis of globus sensation is unclear. Gastroesophageal reflux disease [GERD), laryngopharyngeal reflux [LPR), esophageal motor disorders, and imisper upper esophageal sphincter [UES) function are likely considered the organic cause of globus. [Visceral hypersensitivity, abnormalities of the upper esophageal sphincter [UES), Pharyngeal inflammatory causes including pharyngitis, tonsillitis, chronic sinusitis, psychological and psychiatric disorders, and reflux

have all been implicated [3]. Currently, the causes are considered rather multiform, and many patients' symptoms may have a psychological background.

The initial step of an investigation of globus symptoms should be to take a detailed patient history, paying particular attention to the presence of "high risk" symptoms, associated reflux symptoms, and psychological problems. Additionally, physicians should perform a physical examination of the neck followed by a nasolaryngoscopy examination of the laryngopharynx, although the routine use of nasolaryngoscopy in patients with typical globus symptoms remains controversial [1]. There has been no consensus regarding how best to diagnose and manage globus. A study of United Kingdom-based ENT specialists found that 14% performed no tests on globus patients but rather simply prescribed antacid medication if clinically indicated. The remaining 86% investigated globus symptoms in a variety of ways, including rigid endoscopy (61%), barium swallow (56%), or a combination of these methods [17.5%). Patients with typical globus symptoms usually require no further investigation beyond outpatient nasopharyngolaryngoscopy. However, patients with "alarm signs", such as dysphagia, odynophagia, throat pain, weight loss, hoarseness, and lateralization of pathology, should undergo more extensive evaluation [1,4). These patients are mostly prescribed amitriptyline, paroxetine, gabapentin, etc depending upon clinicians' preferences. Some patients are suggested for behavioral counselling [1,5].

In a cross-sectional survey of over 3000 participants in China, the lifetime prevalence of globus was 22 percent [6]. Globus sensation accounts for 3-4 percent of visits to otolaryngology clinics. The symptom is equally prevalent in men and women among healthy individuals in the community, but women are more likely to seek evaluation. In primary care, one study reported the prevalence amongst consulters to be 6.7 per 100,000 practice encounters[6,7]. Though there are many prevalence studies, there are limited studies that aim to find out the sociodemographic and clinical characteristics of these patients. The purpose of this study is to determine the socio-demographic and clinical characteristics of the patients presenting with globus pharyngeus in the outpatient clinic of a tertiary care center in Nepal.

MATERIALS AND METHODS

This cross-sectional study was carried out in the psychiatric department of Chitwan Medical College, a tertiary care center located in the Bagmati province of Nepal. The duration of the study was 5 months. The approval for the study was taken from the Institutional review committee of Chitwan medical college (CMC-IRC/078/079/-037)

The patients sent for psychiatric consultation for intermittent or persistent sensation without organic lesions as evidenced by nasopharyngolaryngoscopy and upper gastrointestinal endoscopy from the various departments (ENT, Gastrointestinal medicine) were included in the study. Globus pharyngeus was diagnosed after ruling out obvious medical/surgical causes from ENT and the Gastrointestinal department. A psychiatric evaluation was done by a consultant psychiatrist and the diagnosis was made based on ICD-10 criteria. Diagnosis of somatoform disorder was not taken into consideration for the study purpose because almost all patients with unexplained physical symptoms and health-seeking behavior could fulfill the diagnostic criteria for somatoform disorders thus confounding the findings.

Information related to sociodemographic and clinical characteristics of the patients apart from psychiatric diagnosis was collected using two different tools. Study-specific information sheet included demographic, medical/surgical history, and treatment history variables. The Italian version of the Glasgow- Edinberg Throat scale (GETS) questionnaire (Cronbach alpha 0.85) having 10 items on a Likert scale ranging from 0 to 7 was used as a data collection tool after converting it into the Nepali version . GETS is a physician-derived scale for the assessment of throat symptomatology. The original Italian version and Japanese version of the scale have high validity and reliability with a Cronbach alpha value above 0.75. However, in our scenario, the Cronbach alpha value was 0.61, which is poor but acceptable to conduct the study [8,9]. To reduce the biases, the data collection was done by a single physician.

Patients were informed about the need to use a range of possible responses to the question as appropriate. The Chi-square test was applied to find the association of psychiatric illness with other variables of demographic, past history, and treatment history. All calculations were done in SPSS version 25 software. Spearman's rank correlation was used to measure the correlation between the different items of the Glasgow- Edinberg Throat scale (GETS) questionnaire (Table 2)

RESULTS:

Sociodemographic data and clinical history

The majority of the study population belongs to the age group of 36-50 years (n=42) with more females (n=69), from the urban background (n=63), unemployed (n=37), and had received education up to secondary level (n=35). More than half of the patients were married (n=85) and living in a nuclear type of family(n=57).

On presentation to the clinic, seventy-four patients were already on medication for various medical or psychiatric conditions including Globus pharyngeus. There was a history of ENT-related surgery done in 17 people. A high number of patients (n=42) were having lifetime psychiatric illnesses. A history of alcohol, smoking, and another substance use disorder was found in 9, 16, and 5 people, respectively.

The mean duration of globus sensation was 32 months. More than 50 percent of people had symptom onset within a year. 97% of people had past treatment history for throat complaints from non-psychiatrists without satisfactory improvement on an average six-month duration of treatment. Patients had proton pump inhibitors or antacids (n=72), psychotropic (n=43), antibiotics (n=21), and other medications (n=47). Regarding the cause of illness, they had a variety of perceptions with most people believing that the growth of tumors in the throat (n=29) might have been causing problems in their throat.

The statistical significance (p-value <0.05) for lifetime psychiatric illness was found in a group after calculating the chi-square in a 2x2 contingency table that included the place from where the cases were referred, occupation of the patients (employed vs unemployed, p-value: .0489), and the type of family he or she is living (joint vs nuclear, p-value: .013) (Table 1).

Patients in psychiatric outpatient department who had psychiatric comorbidities were significantly more likely to have been referred from the non-ENT department. Similarly, those with psychiatric comorbidities were significantly more likely to be from nuclear families and had unemployed status.

Lifetime						
SN	Socio Demographic Variable		Life time Psychiatric illness (present and past= 42) Yes	No	p value	Frequency/ Percentage (%) Or Mean value where mentioned
1	Age (mean age 37 years)	= < 37 years	23	28	.522	51
		>37 years	19	30		49
2	Sex	Male	9	22	.782	31
		Female	33	36		69
3	Locality	Urban	28	35	.518	63
		Rural	14	23		37
4	Referred case	ENT	29	55	**.00051**	84
		Non-ENT	13	3		16

5	Education	Illiterate	9	23	.537	32
		literate	33	35		68
6	Patient occupation	Unemployed (Inc. Students)	22	19	**.0489**	41
		Employed	20	39		59
7	Family type	Nuclear	30	27	**.013**	57
		Joint	12	31		43
8	Marital status	Married	34	51	.334	85
		Unmarried/separated/ Widow	8	7		15
8	Surgical history Related to ENT	Yes	7	10	0.94	17
		No	35	48		83
10	Alcohol consumption	Yes	3	6	0.58	9
		No	39	52		91
11	Smoking	Yes	7	9	0.87	16
		No	35	49		64
12	Substance abuse	Yes	4	1	0.77	5
		No	38	57		95

Table 1: Correlation of demographic variables with lifetime psychiatric illness (including present and past diagnosis) in chi-square analysis in the 2x2 contingency table of 100 patients with globus sensation.

Throat symptomatology on the GETS scale.

The internal consistency between each item of GETS spearman rank correlation is shown in the table (Table 2). Some showed significant correlation at 0.05 level, and 0.01 level while some showed an inverse relation with some other variables. The Cronbach alpha value was 0.61. The mean score for each item of the 10 throat-related symptoms and 2 somatic reactions (item 11 and item 12) are shown in the table (Table 3). Three symptoms item 1 (feeling of something stuck in the throat), item 2 (Pain in the throat), and item 3 (Discomfort/ and irritation in the throat) were reported with more frequency with a mean value of 4.0Though.09), 3.17 (SD 3.71) and 4.10 (SD 2.17). Although the mean response to the other questions is smaller, each question received a positive substantial number of patients. The extreme leBased onin table 3 shows the patients who had a zero score on the 10 items of the GETS. Items 11 and 12 representing the somatic symptoms in each patient show that about 35 % and 28 % spend the maximum of time thinking about the throat and throat sensation annoying.

On the basis of the modified GETS score, 48% of patients were either symptomatic (score= 9-20) or strongly symptomatic (score >20) while 3% were mildly symptomatic (2-8) and the single person (1%) was asymptomatic. (Table 4)
The average response of each 10 items was compared with males and females in the table (Table 5), Most of the symptoms were more in the female population but 'swelling in the throat' (Item 6), 'can't empty the throat' (Item 8), and 'want to swallow all time' (Item 9) were seen slightly higher in the male population.

	GETS 1	**GETS 2**	**GETS 3**	**GETS 4**	**GETS 5**	**GETS 6**	**GETS 7**	**GETS 8**	**GETS 9**	**GETS 10**
GETS 1										
GETS 2	.102									
GETS	.206*	.174								

3									
GETS 4	.181	.254*	.091						
GETS 5	.310*	.031	.171	.239*					
GETS 6	-.009	-.032	-.111	-.074	.023				
GETS 7	.091	.071	.024	.124	.015	-.054			
GETS 8	.148	-.029	.012	.099	.137	-.017	.047		
GETS 9	.227*	.044	-.122	.127	.025	-.081	.003	.241*	
GETS 10	0.15	-.049	-.019	.133	.181	A -.050	.050	.311**	.202*

*. Correlation is significant at the 0.05 level (2-tailed)

**. Correlation is significant at the 0.01 level (2-tailed)

Table 2: Spearman's rank Correlation between the different items of the Glasgow- Edinberg Throat scale (GETS) questionnaire

	GETS Questionnaire				
	Subject with Zero score	Subject with non-zero score	Subject with maximum score	Mean score	Standard deviation
Q1: Feeling of Something stuck in the throat	9	91	11	4.0400	2.09338
Q2: pain in the throat	19	81	13	3.7100	2.50775
Q3: Discomfort/irritation in the throat	8	92	13	4.0100	2.17653
Q4: Difficulty in the swallowing food	42	58	6	2.1500	2.38419
Q5: Throat closing of	44	66	2	1.8200	2.20825
Q6: Swelling in the throat	63	47	0	1.1100	1.75749
Q7: Catarrh down the throat	88	12	1	.4300	1.45126
Q8: Can't empty throat when swallowing	62	38	2	1.2200	1.86179
Q9: Want to swallow all the time	37	73	2	2.1400	2.09386
Q10: Food sticking all the time	76	24	0	.6500	1.40974
Q11: How much time do you spend thinking? About the throat	0	100	35	5.6500	1.45210
Q12: At present, how annoying do you find your sensation.	0	100	28	5.1600	1.71576

Table 3: Frequency of subjects with zero score, non-zero score, maximum score, mean score, and standard deviation for each item of the GETS questionnaire.

Range of symptoms	Frequency	Percent
Asymptomatic (0-2)	1	1
Mildly Symptomatic (2-8)	3	3
Symptomatic (9-20)	48	48
Strongly symptomatic48((>20)	48	48
Total	100	100

Table 4: modified score scoring system for the range of symptoms in patients with globus sensation.

sex	GETS 1	GETS 2	GETS 3	GETS 4	GETS 5	GETS 6	GETS 7	GETS 8	GETS 9	GETS 10
male	3.1613	3.5484	3.5161	1.5161	1.2581	1.1935	.2581	1.3871	2.1935	.3226
female	4.4348	3.7826	4.2319	2.4348	2.0725	1.0725	.5072	1.1449	2.1159	.7971
Total	4.0400	3.7100	4.0100	2.1500	1.8200	1.1100	.4300	1.2200	2.1400	.6500

Table 5: Comparison between the mean score of male vs the female population for symptoms of each item of the GETS questionnaire.

DISCUSSION

This present study assessed the use of the Glasgow Edinburgh Throat Scale (GETS) in a patient visiting the psychiatric department with a direct visit or referral from other specialists (ENT and gastro medicine). Socio-demographic analysis, present and past relevant history, and the appropriate treatment measures taken by the patient are included in the study.

Studies have found a similar result to our study that globus symptoms have a high prevalence among the female population and middle age groups [10]. Statistical significance of the association between Globus pharyngeus with a demographic variable (age, sex, occupation, history of substance use, smoking, and drinking) is not seen in other studies as well [11,12].

Anxiety disorder and depressive illness are common psychological comorbidities as in many other studies[12,13]. We excluded somatoform disorders from comorbid psychiatric illness because all functional illness including globus pharyngeus mostly fulfill diagnostic criteria for somatoform disorders thus confounding the results. Our studies show a higher frequency of anxiety disorder patients followed by depressive illness having globus symptoms, while one study had a major depressive illness patient more than the anxiety disorder [12].

Discomfort/irritation in the throat and feeling of something in the throat was the main symptoms in most patient, which was a similar result to other studies done in the past [14]. Most items of the GETS scale showed a higher range of symptoms in females except three items; swelling of the throat, catarrh down the throat, and can't empty the throat when swallowing, whereas male patients had a comparatively higher range of symptoms [11]. No cases reported zero scores in any of the 10 questions of the GETS scale, which is similar to the result of *Deary et al.,* but only the symptom "pain in the throat" have a higher mean value, i.e. 3.7 SD 2.5, and few subjects with zero scores compared to the above study had a mean value of 0.7 and standard error of 0.14 and 73 cases with zero scores for the symptoms. A measure of somatic reaction was measured from 2 questions, i.e., time spent thinking about the at and how annoying are the symptoms have all the non-zero positive responses in all the patients as in different other studies done outside Nepal [11,14].

Similar case-control studies [9,10], related to globus sensation result that a high level of psychological distress has been found in many patients which is similar to the result of our study, i.e., higher frequency of symptomatic and strongly symptomatic patients on the basis of modified GETS score (Table 4).

The implication of the study

Knowing about common sociodemographic and clinical features of such patients will help in their early identification. As patients with globus pharyngeus appear to have a long-standing illness with multiple treatment trials in the past, a timely diagnosis can prevent distress and financial burden on them. Our study shows many of these cases have comorbid anxiety and depression. Just focusing on throat symptomatology sometimes can miss psychiatric disorders comorbid among these patients. So this study suggests an integrated approach from various medical specialties.

Limitations of the study:

Ours is a resource-poor setting, so all tests to rule out medical causes of globus sensation could not be done. Globus pharyngeus diagnosis is based upon clinical findings from ENT and the Gastrointestinal medicine department and it is taken as a diagnosis of exclusion.

CONCLUSION

This study concludes that referred cases from the ENT who has a chronic and long-standing course and have had multiple treatment trials in the past are likely to be diagnosed as having globus pharyngeus. These cases are typically married, female, from nuclear families, and of the age of thirties. Feeling of something stuck in the throat, pain in the throat, and difficulty in swallowing are major globus symptoms. Anxiety disorders and depressive disorders are commonly seen as comorbidities. Patients have similar sociodemographic characteristics whether they have psychiatric comorbidities or not. Integrated approaches from ENT, gastro-intestinal, and the psychiatric department are important in the diagnosis and management of these patients. Timely diagnosis and intervention will reduce patient distress and financial burden arising out of the long-standing symptoms.

CONSENT

Written informed consent was obtained from the patient (or other approved parties) who were enrolled for this study.

ETHICAL APPROVAL

Ethical approval was taken from Institutional review committee of Chitwan Medical College (CMC-IRC/078/079/-037)

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